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Lowell S. Selling

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Modern Psychiatry from the Practitioners' Standpoint

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ORLANDO

When one realizes that there are hundreds of journals being published on various aspects of medicine, it is obvious that even widely read periodicals such as The Journal of the Florida Medical Association or The Journal of the American Medical Association only skim the literature. One need not be surprised, then, that the knowledge which the general practitioner can gain of such a recondite specialty as psychiatry is limited. But psychiatry has a great deal to offer in providing treatment for seemingly strictly "physical" medical and even surgical cases, and physicians today need to know a great deal about psychiatry if they are to treat or even to refer to the appropriate specialist patients who will profit by strictly psychiatric treatment.

Since the turn of the century, much information has been added to our knowledge of the mind and how it works. The original brilliant researches of Sigmund Freud have been followed up by many of his disciples. They have modified them, amplified them, and perhaps in some cases overglorified them. But they have enabled the specialist in mental disease to concentrate on the interpretation of symptoms rather than on mere palliative medication. And in many ways they have, with regard to the abnormal psychology of the patient, represented the same trends that the physician, in dealing with physiologic problems, has followed in studying pathology, biochemistry and chemotherapy, to interpret the deeper meaning of physical symptoms.

The interpretation of psychologic symptoms requires too much amplification to be discussed here. Certainly we know that the anxiety and tension states which are so frequently brought to the physician, and which he tries to deal with by means of phenobarbital, thyroid extract and hormone extract, do not, as a general rule, if at all deep-seated, respond to medication.

More frequently than one would think, the patient becomes so discouraged with his lack of response to medication that he loses faith in physicians. He turns to faith healers, chiropractors and others of similar ilk, who largely, by giving the patient a great deal of attention and by sitting down and letting the patient talk about his problems, help to get him into the right mood so that his own basic mental stability overcomes the largest part of the abnormal symptom complex.

Certain general rules can be adduced from this knowledge. One is that if there are sufficient psychiatrists available, patients with obvious psychoneurotic or psychosomatic disorders, who do not respond quickly to the use of medication, should be properly referred for expert psychotherapy. It is interesting to note, in this connection, that the patient who is referred early in the course of his psychosomatic or psychoneurotic disorder and recovers, or is helped by a psychiatrist, forms a deeper attachment to the physician who originally referred him. If, on the other hand, the physician who refers the patient waits until he is pretty much discouraged, it is harder for the psychiatrist to treat the patient, and often the patient, when some physical disorder occurs later in his life, will seek out another physician. Of course, the attitude of the patient that (1) it is a disgrace to go to a psychiatrist and (2) it is extremely expensive to go to one depends on early referral. If his disorder is allowed to become chronic, he frequently has the feeling that he "must be crazy or they wouldn't be sending me to a psychiatrist." And, of course, the longer the condition exists and the more deep-seated it becomes, the more expensive it is for psychiatric treatment.

Does this, then, mean that in all cases of psychosomatic disorders the patient must be referred to a psychiatrist? By no means. As a matter of fact, there are innumerable cases in which there

will be response to careful and understanding psychiatric treatment by the family physician. I do not mean by this that the family physician must be able to carry out a complete course of psychoanalysis, nor that he should delve deeply into the sexual life of the patient, although the latter cannot be ignored.

In a recent report Wilbur[1] pointed out that a careful study of the environmental situation, as well as a careful study of the body of the patient, is, to begin with, good therapy. The patient knows that he is being studied; he knows that care and attention are being given him. And oftentimes, women who become neurotic in middle age are responding only to the fact that they are no longer getting the attention they got when they were younger. Even men who are ill have the subconscious desire to become more important than they feel they are. Frequently they belittle themselves so that the doctor will contradict them and build them up emotionally. Sometimes they are too discouraged for that type of build-up, but when they realize that everything is being done for them, it helps them. For this reason the patient needs plenty of time to talk to his physician. Much value from psychotherapy comes from just talking at random, letting some of the patient's complaints come out of his system. It has a strangely sedative effect, somewhat like giving a bland diet to an ulcer sufferer.

But only too often nowadays, when physicians are extremely busy, the patient gets a sense of being merely a product from a medical assembly line. There are no therapies that the physician can give to the psychologically unstrung that can compare in effect with the impression that the patient is his chief interest, that time is not limited, and that the physician is prepared to sit down and give him good advice.

On the other hand, when careful study shows that the patient is suffering from a disorder which is apparently not of physical origin, an easy way to make his condition chronic is to tell him that it is "imaginary." For that patient, the feeling of tension, anxiety, headache, or what he might have is just as real to him as if it were something physical. I have found that it is safe to tell a patient that his condition originates in his nervous system, and a simple explanation of how the nerve tracts work in coordination and balance when the patient is tremulous or unsteady, will give him the assurance that something can be done for him, which often sets him on the path to recovery.

Psychotherapy

In the early days of psychotherapy, when Freud's work was beginning to be known, many physicians decided that the problems of the maladjusted spinster were due merely to a lack of sexual intercourse and that in the case of married couples, when there was friction or neurotic disorder, the maladjustment was in the field of the simple sex act. Continuous and expanding study has shown that, although adjustments are extremely important in the causation of anxiety states, fear states, tension and fatigue states, the sexual maladjustment is in the field of patients' ideas of sex rather than in the act itself. Of course, it is true that there are persons, particularly women, who are apparently frigid and men who are impotent, who are dramatically serious, but they comprise only a small fraction of the sexually maladjusted. These exist because their parents gave them guilt feelings about sex or because they have feelings of shame or guilt about masturbation, or they have deep-seated memories about sexual wishes during their childhood periods of development, all of which lie outside the field of correction by sex education.

It is true that in many cases, particularly in young people, a valuable scientifically prepared manual on sex and a discussion of the sex act with the physician are of extreme importance, but in many instances the physician has a great deal to learn as to what constitutes the normal sex act or rhythm, for even physicians were startled by the findings in the Kinsey Report, which indicates how much more frequent masturbation and sexual "perversion" are in normal people than we had been led to believe.

Our ideas on the subject of medication for persons having tension states have changed rather drastically in the last ten years. When phenobarbital and its cousin, mebaral, came out, the feelings of relaxation which the patient gained lead many of us to believe that this was the answer to the psychoneurotic problem. It did not remove the cause, however, and those relatively few patients who recovered by the sagacious use of these drugs did so by enabling nature to clear up the problem.

The use of thyroid as a stimulant has, in my experience, given rise to much uncorrectible after-effect. Many patients have come to me after taking thyroid extract over long periods of time whose metabolism has been permanently changed. In some, hyperthyroidism has actually developed. None of them has been cleansed of any psycho-

neurotic taint. Of course, there must be some who have undoubtedly recovered who have not been observed by a psychiatrist because they did get well, but the number of patients who have had repercussions later in life because of long-continued use of thyroid is surprising. Whether this observation will prove true after a while in the case of benzedrine and similar stimulating drugs cannot be predicted, but certainly it is true that in many cases in which the patient is actually depressed and cannot sleep, the use of benzedrine aggravates these symptoms, although the patient may feel a little better during the day. In order to help the psychoneurotic patient, therefore, medication should, I believe, be used sparingly.

If the physician cannot employ psychoanalysis or hypnosis because of the need for the special preparation for these technics and the opportunity to use real psychotherapy does not seem to occur often enough in his practice for him to take training, he need not be discouraged. There are milder forms of psychotherapy which he can use: (1) Strong suggestion, particularly if it is based on scientific knowledge of the patient's condition, is helpful. (2) The doctor needs to take a bright, cheerful attitude and never let pessimism come into the discussion of the symptoms. (3) A common feature of the psychoneuroses, even when the patient is recovering, is the fact that he has good and bad days, and he should not be permitted to become discouraged when he feels bad, but should, rather, feel that he has access to the physician even if he is going to take a long time on the telephone. Psychiatrists often arrange for the payment of fees for long telephone conversations, and set aside special times so that the patient can get them and spend the necessary time on the telephone. This, of course, is not ideal psychotherapy, but may be necessary and may be useful, too, in the hands of the physician who wishes to do what he can for the psychoneurotic patient.

Depression

Psychiatry is learning a great deal more about the nature of depressions since the development of electroshock therapy. Many people, physicians as well as laymen, have the idea that electroshock therapy is useful for only those persons who are "insane." This is not true. In smaller doses, with more recently developed equipment, modern electroshock methods are painless, there is no electrical feeling connected with them, and in many instances they do not need to be given in the hospital, although cases in which office treatment is suitable must be well selected and every precaution must be taken for the patient's safety.

With the increased knowledge of what is meant by depression, the physician is learning to have this type of treatment carried out in more and more cases, oftentimes with dramatic results. This group of cases is characterized primarily by difficulty in sleeping, feeling of depression, particularly in the morning, and without any reference to what has happened to the patient. Sometimes factors can be adduced to which the family will ascribe the cause, but as a general rule, these causes are not sufficiently severe to be a basic factor in the patient"s illness. Rather, disturbance of the endocrine glands seem to have a greater part than psychologic causes, such as sudden poverty, sudden loss of a relative, and a number of emotional or financial problems coming upon the patient who is illy prepared for them. These appear to be exciting rather than the basic causes.

The basic causes are frequently noted in connection with the menopausal period, sometimes the immediate postpartum period (the latter having been named by someone the parapartum psychologic depression), and extremely frequently occur after some type of surgical intervention with the female genital organs.

A large proportion of patients who have had operations in which the uterus, the ovaries, or some substantial part of these organs has been removed, have long time depressions which do not respond to estrogenic substances. Oftentimes in these cases the condition improves with the administration of estrogens, only to lapse and to become persistent.

In the male, the causes of depression are somewhat different. Usually they are mild manifestations of manic-depressive psychosis. The menopausal depressions in the male are not as characteristic or as frequent as they are in the female.

Some of the symptoms occurring in the female, which are rather characteristic and which may be present only in a mild degree, are self-accusatory ideas. The patient feels she has not done as she should have for her family, that she has been nothing but a burden even though she may have been a good housewife and good mother up to the period of her depression. She may also have a desire to remove herself from this world, although this state is not frankly suicidal unless so severe that it constitutes a major psychotic depression. But the patient always has the idea that she would

be happier if she were not alive. She may describe her symptoms as feeling she does not want to do anything or she cannot make herself work. I have had several patients of this sort say they felt as though only part of the mind was working.

This whole group of patients responds well to various types of electroshock treatment. There are several different types of apparatus which the psychiatrist should have at his fingertips if he administers shock therapy. If there is more anxiety than depression, one type of equipment is used; if depression is the major symptom, another type is used. A decision as to which type is to be used would have to rest in the hands of the therapist. But it is necessary for the physician to recognize the fact that a depression of only a few months' standing is likely to respond to shock therapy with a minimum of discomfort, a minimum of pain, and a minimum of hospitalization. In fact, in some of these cases the patients are now being treated in the offices of psychiatrists, and the sooner they get into the hands of the psychiatric therapist, the quicker their recovery and their return to a healthy, normal, pleasant life. In resistant cases there sometimes follows one treatment a week or two treatments a month for a period of time after the first series is complete. The number of treatments to be given would have to be determined largely pragmatically. I prefer that the patient suffer a decided loss of memory for a few days before I discontinue the treatment. This means that, when other therapists will consider a series of from six to eight treatments adequate, it may take as many as ten or twelve in an average case of depression, particularly during the menopausal period, to obtain permanent results. We often hear the complaint that shock treatment is not a permanent treatment. It is doubtful if anything in medicine is permanent, but we do have complete recoveries which last for long periods of time. Many patients treated during the early days of shock therapy are still well and have had no relapse. Oftentimes the relapses which occur, do so because there is pressure upon the psychiatrist to discontinue the treatments, sometimes before he thinks that the patient is well able to stand on his own feet, and even when he believes that further treatment is really necessary to complete the series. Such a patient does not experience relapse because the treatment is unsatisfactory, but rather because there is difficulty in keeping the patient under treatment long enough to make sure that there is adequate therapy.

The number of chronic or recurring cases of depression which fall into the hands of the general practitioner is much larger than one thinks, and they are more frequently mismanaged than is usually believed to be the case. This conclusion is indicated by the recent report of Stone and Burris.[9] If the patient knew of the conditions and circumstances surrounding shock treatment, in a majority of instances she would prefer two to four weeks of some discomfort and unpleasantness during treatment to months of suffering and unhappiness.

I must emphasize, however, that it is wiser for the physician referring a patient for possible shock treatment to leave the decision as to therapeutic procedure in the hands of the psychiatrist. Frequently there are circumstances surrounding a particular case which make psychotherapy the treatment of choice. Sometimes the mere bringing of a new pair of eyes to observe the symptoms of the patient will disclose that the condition is clearing up, while again anxieties and other psychoneuroses which appear to be accompanied by depression will not respond to shock treatment because they are not true depressions but fall into a simulating group of psychoneuroses that must be taken care of by psychotherapy.

Treatment of Psychosomatic Symptoms

py, where will he find his best tools for treatment in the case which is characterized by tension of the neck, migrating aches and pains, psychogenic paralysis, gastrointestinal symptoms like "butterflies in the stomach," or the palpitation of the heart?

Unless the matter be urgent or severe, or the physician knows at the onset that he will not be able to give the time and attention to the case, a brief period of psychotherapy, making use of the

If the psychiatrist or the physician is not to treat the psychoneurotic patient with shock therapy, physician's own close relationship to his patient and following the procedures described in the first part of this paper, should be tried before the patient is referred to the psychiatrist. But when the condition is obviously one for long time therapy, is resistive to the physician's therapy for over a month and deserves a great deal of attention or is difficult to diagnose, it is probably one for the specialist.

While the patient is always afraid that he is

stigmatized by going to the psychiatrist, I have observed that most physicians can offer evasions, such as, "Of course he is a psychiatrist, but he is also a neurologist — a specialist in the conditions of the nerves." Or, "You know, nowadays psychiatrists treat many rather mild conditions such as yours."

It is well not to allow the patient to jockey the physician into predicting what course of treatment the psychiatrist will follow or how long the treatment will take. If the psychiatrist is going to use psychotherapy, he will probably use one of the folowing technics: (1) Psychoanalysis or one of its modifications means long and frequent sessions with the patient, in which he allows his mind to follow its natural train of thought until critical memories are brought into the open — a process known as catharsis, whereby the mental "toxins" are evacuated in much the same way that patients get physical relief from intestinal catharsis. (2) Hypnosis consists of using suggestion in order to build up the patient's self respect and courage so that he can use his own nervous powers to subdue his physical symptoms. Although any physician, or for that matter any layman, could learn the technic in half an hour, constant, almost daily, use of it and original training under supervision are necessary to get the best medical results from hypnosis and suggestions. Hypnosis cannot be as deep as it has to be in a stage presentation. The psychotherapist is not interested in producing antics to make the patient a dramatic subject, but rather is interested in convincing the patient against his will that he is going to get well. The psychiatrist cannot afford to fail because one failure of hypnosis or, for that matter, any form of psychotherapy creates skepticism in the mind of the patient. The use of hypnosis in psychiatry is much more frequent than physicians realize, for it is a quick-acting tool, sometimes producing almost miraculous results, although, occasionally, these may only be temporary. Even if the result is temporary, it is encouraging and does not act like the temporary effects of drugs, which oftentimes leave the patient more discouraged than when he started his treatment. It is most useful when the patient can afford neither time nor money for a long series of treatments and, unfortunately, most patients are still hard to convince that a dollar spent on medical care is the most valuable dollar he can invest.

Summary

I have tried to cover briefly the most important phases of today's psychiatry, which differs greatly from the psychiatry of even fifteen years ago. I could only touch on high spots, of course, and I have had to deal with some superficial issues rather dogmatically. I am hoping that there are enough hints and suggestions in this paper to help the physician deal with the most difficult patients who come into his office, those suffering from psychoneuroses, depressions, and psychosomatic symptoms.

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Fatal Aplastic Anemia Associated with Mesantoin: Report of a Case with Autopsy

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Mesantoin was first introduced for the treatment of grand mal epilepsy in 1945 by Loscalzo[1] and Kozol.[2] It is closely related to diphenylhydantoin, both of which belong to the hydantoin group. The chemical formula of mesantoin is 3-methyl-5, 5-phenylethylhydantoin. The drug has been accepted with a great deal of enthusiasm because of its low toxicity. The commonest toxic manifestations have been drowsiness and minor skin irritations. Loscalzo[1] reported that in 4.5 to 14 per cent of his cases he observed skin reactions and in approximately 40 per cent he noted a moderate increase in the lymphocytes at the expense of the polymorphonuclear cells. It is the consensus of those who have utilized this drug to any extent that the patient should have the benefit of monthly physical examinations and hematologic studies and that one should view with suspicion any decrease in the hemoglobin and granulocytes.

A review of the literature on the use of mesantoin in grand mal epilepsy reveals that several cases of aplastic anemia and associated conditions have been reported. Harrison, Johnson and Ayer[3] reported a fatal case of aplastic anemia in September 1946, but the patient had also been taking tridione. Bloom, Lynch and Brick[4] reported a case of aplastic anemia with recovery in October 1948. Holland and Frank[5] in December 1948 reported 2 cases of pancytopenia, in one of which the patient died. England and McEachern[6] reported a fatal case in February 1949, and the most recent case in the literature, reported by Forster and Frankel[7] (April 1949), also terminated fatally.

Report of Case

Mrs. L. W., a white woman aged 31, was first seen by the neuropsychiatrist on Oct. 2, 1948, at which time she was in the hospital following delivery of a full term infant. She gave a history of having had convulsive seizures since the onset of menses at the age of 14, but no seizures had occurred during the pregnancy. They usually occurred during menstrual periods, and she would sometimes have several attacks during the day. There was no family history of convulsive disorder and no history of serious injury. She had three seizures during the first twenty-four hours following delivery. Neurologic examination gave negative results except that the patient was drowsy and confused.

The treatment prescribed consisted of 1½ grains of dilantin and ½ grain of phenobarbital three times a day following meals. She was discharged from the hospital on October 10. On November 1 she stated that she had had no further seizures, but that she was weak and tremulous. Weakness and trembling continued, and early in December she fell with the baby. She was examined by her family physician, and her blood count at that time was reported as normal. On December 13 she was advised to discontinue the dilantin and was given mesantoin 0.1 Gm. three times a day following meals. She was not seen by the neuropsychiatrist, but made the following reports to him on the telephone: On December 23 she was feeling much improved in every way and had had no seizures. On Jan. 5, 1949, she had a seizure. She stated that she had been menstruating for several days and the day before she had had a dental extraction. She was advised to increase the mesantoin and the phenobarbital to four times a day. On January 28 and March 2, she reported that she was getting along well.

The patient was seen by her dentist on September 14 for a routine survey and cleansing of her teeth. The dentist noticed that the slightest trauma to the gums would precipitate an oozing of blood that was difficult to control. She was referred to her family physician and after a delay of several days went to see him. At this time she had numerous petechial hemorrhages in the mouth, and there were two small, eroded dirty ulcers on the right side of the lower lip and the inner surface of the right cheek. The remainder of the physical examination gave essentially negative results. She was given 300,000 units of procaine penicillin and some sulfadiazine tablets to take orally. Her condition became progressively worse, with development of fever, weakness and great drowsiness. She was hospitalized on September 23. On admission her temperature was 102.6 F., pulse 100 and regular, respirations 20. There was pronounced pallor, and the gums and cheeks revealed numerous petechial hemorrhages. The ulcers described previously were still present. Examination of the heart and lungs gave negative results; the blood pressure was 112 systolic and 60 diastolic; the liver and spleen were not palpable. The patient was having a regular menstrual period at the time of admission.

Laboratory work on admission revealed: hemoglobin 4.5 Gm., red blood cells 1,300,000, white blood cells 1,500, anisocytosis and poikilocytosis, and a differential count of 90 per cent lymphocytes, 8 per cent segmented forms and 7 per cent stab forms. Urinalysis gave negative results. Bleeding time was four minutes and clotting time two minutes; there was no clot retraction in twenty-four and seventy-two hours. Roentgen examination of the chest gave negative results. Agglutinations and blood culture were negative. Platelets were 15,720 and reticulocytes 5.3 per cent.

Table 1 shows the reports on the blood work during treatment.

Table 1

Dates	Hemoglobin (Grams)	Red Blood Cells	White Blood Cells	Differential (Per Cent)
9-24-49	8.5	2,460,000	620	94 lymphs. 2 stabs. 4 segs.
9-26-49	12.0	3,560,000	350	100 lymphs.
9-27-49	13.0	4,028,000	950	99 lymphs. 1 seg.
9-28-49	14.0	4,570,000	950	100 lymphs.
9-29-49	15.5	4,700,000	1000	100 lymphs.
9-30-49	15.5	4,630,000	950	99 lymphs. 1 eosino.
10-1-49	14.5	4,500,000	350	100 lymphs.

Treatment

The patient was given daily transfusions (total of 9 pints), massive doses of penicillin, pentnucleotides, vitamins by mouth, and liver and folic acid parenterally. The epileptic attacks were controlled by phenobarbital in 1 grain doses four times a day. The medication had no apparent effect on the condition which became progressively worse. On September 30 she had two severe epileptic convulsions, and hematuria developed. On October 3 there were numerous moist rales in the chest, and the temperature was 106 F. by rectum. Aureomycin was administered intravenously, but she became progressively weaker. Hemorrhages occurred from the mouth and nose, and she expired.

The report of the postmortem examination, made nineteen hours after death, follows:

"The body is that of a well developed, well nourished, thirty year old white female appearing older than her stated age. The body measures 5 feet 4 inches in length and weighs 120 pounds. There are small hematomas in both ante-cubital fossae and the right hip. There is slight but definite jaundice of the skin and sclerae. There is evidence of stomatitis with formation of a few white patches on the buccal mucosa. Arterial embalming has been done.

"The pericardial cavity contains 100 cc. of brownish red bloody fluid. The epicardium contains numerous small petechiae, as does the myocardium. The heart is small and weighs 250 Gm. The left ventricular wall measures 1.5 cm. in thickness and the right 0.5 cm. The heart is otherwise not remarkable. The aorta contains a few small subintimal atheromatous plaques.

"The pleural cavities each contain 150 cc. of serosanguineous fluid. A few petechiae are found over the pleural surfaces. The right lung weighs 1,250 Gm. and the left 800 Gm. The right upper lobe, most of the right middle lobe, right lower lobe, and left lower lobe are markedly hemorrhagic and solid. They do not float in water. The bronchi are filled with dark red bloody fluid. The microscopic picture of these lobes is that of hemorrhage into all structures. The rest of the lung shows edema and distention of all vessels.

"The peritoneal cavity contains a small amount of serosanguineous fluid. There are hematomas in the retroperitoneal areas of the pelvis and in the mesentery of the large bowel. The stomach contains 1,000 cc. of blood. Its wall is hemorrhagic and thin. The liver weighs 1,550 Gm. and is very soft. The liver cells are small and compressed. The Kupffer cells are prominent and heavily pigmented. The spleen weighs 290 Gm. The follicles are very small. The sinusoids are dilated. The kidneys together weigh 230 Gm. They exhibit only hematomas of the pelves and slight interstitial edema.

"The bone marrow is very pale and grossly scanty. Microscopic section shows marked decrease in hemopoietic tissue and a relative increase in the amount of adipise tissue. The differential count gives 65 per cent lymphocytes, 10 per cent plasma cells, 2 per cent myeloblasts, 1 per cent myelocytes, 8 per cent normoblasts, 1 per cent megaloblasts, and 19 per cent Q cells."

"Diagnosis: Aplastic anemia. Pulmonary hemorrhages. Gastric hemorrhages. Multiple hematomas and petechiae. Icterus levis."

Comment

This patient was receiving mesantoin and phenobarbital in therapeutic doses for nine months. Careful questioning failed to elicit the use of any other substances which might be implicated. Review of the literature failed to reveal any report of aplastic anemia associated with the use of phenobarbital.

Summary

A fatal case of aplastic anemia associated with mesantoin therapy is reported.

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VOLUME XXXVII
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A Review of Antibiotics in Treatment of Diseases of the Chest

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When Fleming discovered penicillin in 1928, an entirely new era in the treatment of infections was begun. Since then, numerous antibiotics have been developed. The most commonly used thus far have been penicillin, streptomycin, aureomycin and chloramphenicol. This paper will deal chiefly with these four, limiting their usage to diseases of the chest.

Penicillin

The first and still the most useful is penicillin. This antibiotic is produced by the growth of the common mold, Penicillium notatum. It is most useful in the respiratory diseases caused by the following organisms: (1) Diplococcus pneumoniae, (2) staphlococci with the exception of Staphylococcus aureus, (3) streptococci with the exception of Streptococcus faecalis, (4) Actinomyces bovis and (5) spirochetes. The first most important disease in which penicillin rendered invaluable therapeutic aid was pneumococcal pneumonia; it practically eradicated this disease for few cases of frank lobar pneumonia occur at the present time. Penicillin is also of great value and preferable in those pneumonias due to the staphylococcus and streptococcus.

It is indicated in the treatment of acute and chronic bronchitis and bronchiectasis when administered by aerosal inhalation. Here, it produces a reduction in both the amount and character of the sputum, decreasing it greatly and converting it from a purulent to a mucoid character. In acute abscess of the lung, which is usually due to a gram-positive organism, penicillin has frequently avoided the necessity of surgery when administered by a combination of aerosal and intramuscular route. In chronic pulmonary abscess, penicillin has been useful both preoperatively and postoperatively in preventing complications and promoting better healing. Surgeons have recently noted a considerable reduction in the number of pulmonary abscesses observed and attribute this reduction to the frequent use of penicillin in those diseases which have abscess of the lung as a complication. Penicillin is also of great value in empyema. In acute cases, a combination of parenteral and pleural instillation of penicillin after aspiration has in many instances avoided the necessity of surgery. If after one week of this treatment sufficient improvement has not occurred, then surgical intervention is indicated, since further delay might result in a thickened pleura and nonexpanding lung. Recently, streptokinase has been combined with the intrapleural administration of penicillin. This new agent is fibrolytic in mode of action and liquefies the pleural exudate, allowing its removal more easily.

Administration of penicillin before and after surgery for intrathoracic tumors has diminished greatly the postoperative complications. Its use in surgery of the heart and great vessels has been debated, because of the possibility that the penicillin might cause an increased tendency towards intravascular clotting. In cases, however, of Streptococcus viridans subacute bacterial endocarditis (without patent ductus arteriosus) 90 per cent recovery has been reported by Troutman and Vincent, in a review of their own and other cases, with adequate doses of penicillin, sometimes as much as 20 million units a day. Prophylactic administration of penicillin has been discouraged because of the possibility of developing a penicillin resistance or allergy. Exceptions, however, have been made for prevention of rheumatic fever, before and after dental extractions in patients with organic heart disease, and in surgery about the mouth, throat or rectum.

The methods of administering penicillin may be enumerated briefly. The preferred avenue of administration is the intramuscular route for a repository type of penicillin. At present, procaine penicillin in sesame oil is most commonly used. It has been shown that satisfactory blood levels of penicillin with an aqueous suspension of 300,000 units per cubic centimeter persist from twelve to twenty-four hours. Oily suspension of the same dose prolongs the penicillin blood level thirty-six to forty-eight hours, and if aluminum monostearate

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is added, detectable amounts in the blood stream are present from forty-eight to seventy-two hours. In severe cases such as blood stream infection, large doses are necessary. For example, in subacute bacterial endocarditis or bacteremia without cardiac lesions, from 1 to 5 million units daily may be necessary. In these cases sensitivity tests should be employed as a preliminary measure to determine the exact dosage necessary.

The aerosal inhalation method of administration is especially useful in the diseases of the bronchi, and in abscess of the lung, since it is often difficult for penicillin in the blood stream to penetrate the thickened walls of inflamed bronchi and encapsulated abscesses. Penicillin by mouth is the least desirable avenue of administration since much of it is destroyed by the gastric juices and at least five times the usual dosage is necessary. It should not be used in severe infections. Local application of penicillin should be avoided as much as possible since it may cause sensitization of the patient. Intrathecal administration should also be avoided, not only because of possible irritation, but also because adequate concentration can be found in the spinal fluid after other methods of administration.

The action of penicillin depends on its absorption into the cell structure of the bacteria as evidenced by experiments with radioactive penicillin. Studies show low levels are bacteriostatic and high levels are bacteriocidal. As increasing amounts are absorbed in the cell structure of the bacteria, the organism begins to swell, and its appearance becomes granular and cloudy until it finally disintegrates. High enough dosage, therefore, should be used to be most effective. Eagle and Musselman observed a bacteriostatic effect, which persisted a number of hours after removal of the penicillin (experimentally done by neutralization with penicillinase). This suggests that the therapeutic action persists for many hours after the drug has fallen to ineffective concentration. Bacteria do not grow for three to eight hours after neutralization of penicillin administered. Tempel and Dye, using 1 to 2 Gm. of streptomycin every third day, have reported clinical and roentgenologic results comparable to those obtained by the 1 to 2 Gm. daily dosage schedule, without significant toxic reactions to the drug and with delay of emergence of streptomycin resistant organisms.

Penicillin resistance is not as much of a problem as with streptomycin, but it is a factor which has to be considered. It has been shown that the basis for the resistance is penicillinase, which inactivates penicillin. Those organisms sensitive to penicillin do not produce penicillinase, while those that produce penicillinase are not sensitive. Experimental evidence suggests that changes in bacteria from sensitivity to resistance in both penicillin and streptomycin originate as mutations, the antibiotic eliminating the sensitive bacteria, allowing resistant mutants to develop.

The toxic reactions to penicillin have been divided by Criep into two groups, the allergic and the nonallergic. The types of allergic reaction, according to this author, consist of (1) a serum disease pattern similar to that produced after an introduction of heterologous serum, characterized by fever, arthralgia and dermatitis of urticarial or angioneurotic type. These usually appear in three to twelve days and are reversible, disappearing after a short time in most cases. It has been suggested by Waldo and Tyson that this reaction is due to the coupling of the penicillin haptene to albumen in vivo, constituting an antigen for production of antibodies specific to this haptene group. They found that penicillin alone did not produce antibodies, but an albumen penicillin mixture did. (2) The second type is the anaphylactic reaction, which is much less common. It usually appears after the second or third administration of penicillin. This is an intensified serum disease pattern occurring from a few minutes to a few hours after the administration of penicillin, and may be severe enough to bring on collapse or shock. (3) The third is the atopic, in which a person subject to hay fever or asthma may be spontaneously allergic, so that after administration of penicillin, there will immediately develop an attack of asthma or hay fever. (4) The fourth is the ID type, producing a delayed erythematous papulovesicular rash after administration of penicillin in patients who have been previously sensitized to various fungi as a result of trichophytosis or some similar dermatophyte disease. (5) The fifth is the contact type of eczematous dermatitis produced by epidermal sensitization after topical application or handling of penicillin.

The nonallergic reactions are divided into two types. (1) The Herxheimer type consists of a severe exacerbation of manifestations produced by the massive destruction of spirochetes in the local syphilitic lesion, and also sometimes in eczematoid dermatitis produced by the liberation of bacterial products at the point of lesion. (2) The second is the toxic type, for example, when penicillin is intro-

duced intrathecally with consequent irritation. Penicillin desensitization is not practical in most cases of penicillin allergy.

Streptomycin

The second important antibiotic, streptomycin, was first described by Waksman in 1944. It is derived from strains of Actinomyces griseus. Streptomycin is effective against many gram-negative organisms resistant to penicillin. It is of considerable value in those diseases caused by: (1) Friedlander's bacillus, (2) Pasteurella tularensis, (3) Pasteurella pestis, (4) Hemophilus influenzae, (5) Escherichia coli, (6) Bacillus pyocyaneus, (7) Brucella (with sulfadiazine), and (8) especially the tubercle bacillus, against which it has been chiefly employed.

In tuberculosis, it has been found to exert a favorable influence on fresh exudative lesions, on the ulcerative mucosal lesions of laryngeal and intestinal tuberculosis, in primary tuberculosis (both pulmonary and glandular), and in posthemoptic spreads. Autopsies in streptomycin-treated cases show a decided decrease in the amount of perifocal reaction about areas of caseation, a great decrease in intestinal and laryngeal complications and an increase in the amount of productive reaction at the periphery of caseous and pneumonic areas.

The mode of action of streptomycin in promoting healing is unknown. Healing is probably due to its bacteriostatic action on the tubercle bacillus, rather than its influence on the host. The inhibition of the bacteria probably affords the opportunity for the tissue reactions to proceed to fibrosis. For example, in chronic cases in which streptomycin therapy is employed, tubercles contain an unusual number of large giant cells with fibrosis. Such healing is not commonly observed in untreated cases. Evidences of benefit by streptomycin in the properly indicated types of tuberculosis are: (1) a drop in temperature, (2) a decrease in the amount of sputum, (3) sputum conversion, (4) a decrease in the sedimentation rate, and (5) a feeling of increased strength and well-being. Its chief limiting factors are: (1) the inability to close cavities, (2) the toxicity, and (3) the development of resistance to it by the tubercle bacillus.

Cavity closures have been reported with streptomycin therapy, but they are often more apparent than real. The cavities have been merely lost to view on the roentgenogram and soon reappear. Many have reported the thinning of cavity walls with streptomycin therapy. This is merely a resolution of the perifocal reaction around the cavity wall. The perifocal reaction ordinarily stands out on the roentgenograms. With its resolution the well defined shadow disappears, and subsequently it is often difficult to delineate the cavity, although this cavity has not actually disappeared. Although unable to close cavities, streptomycin is nevertheless a valuable aid in those cases in which there is a contralateral spread. Here it allows temporary suppression of the contralateral disease permitting the collapse of the cavity side by other means. Streptomycin may be of some value in the treatment of pleural effusions by possibly preventing the pulmonary lesions, which so often follow. Streptomycin is also of value in the treatment of tuberculous empyema, with bronchopleural fistula. Surgery has been prevented in a percentage of those cases in which (1) the bronchopleural fistula was small, (2) there was an absence of secondary organisms, and (3) there was an absence of a thick fibrin cortex over the lung. Otherwise, surgery is the recommended method of treatment.

A preliminary course of streptomycin is recommended in surgical procedures such as pulmonary resections, in closures of cavernostomies, and especially when endobronchial tuberculosis exists. The mortality rate in pulmonary resections has been lowered to 1 per cent, from an original 15 per cent, by the judicious preoperative and postoperative use of streptomycin. Also, in pericardectomy, when tuberculosis is suspected as the cause of constrictive pericarditis, administration of streptomycin allows much earlier surgery.

The preferred method of administration is by intramuscular route. It may be combined with aerosal inhalation for tracheobronchial tuberculosis. Streptomycin is not absorbed by the intestinal tract, and its oral administration is not ordinarily recommended. Such usage, however, has been suggested as a preoperative procedure in surgery of the intestinal tract as a prophylactic measure, possibly by the beneficial action on the intestinal flora locally.

The most troublesome toxic reaction to streptomycin has been its effect on the eighth nerve, with damage to the vestibular component as evidenced by vertigo and occasional deafness, sometimes to an irreversible degree. A decrease in the dosage from 2 Gm. to 1 Gm. daily has diminished this complication considerably. Also, replacement with dihydrostreptomycin has decreased the possibility of vestibular complications. Other toxic reactions to streptomycin are various types of der-

matitis, the commonest of which are maculopapular and desquamative lesions. In a small percentage of cases, drug fever, eosinophilia, renal irritation, nausea and vomiting have been reported.

Resistance to streptomycin by the tubercle bacillus can develop with an amazing rapidity, and to a greater degree than with any of the other antibiotics. The favorable action of streptomycin is limited to the period of sensitivity of the tubercle bacillus. It has been shown that tubercle bacilli, resistant in vitro, are also resistant in the body, thus enabling the physician to decide in advance whether streptomycin therapy would be of value. In those cases in which improvement continues, undoubtedly the patient's natural resistance is allowed to become dominant. If, however, drug resistance develops prior to this event, then the patient returns to his original status. Strains of streptomycin-resistant bacilli emerge at a fairly regular rate, which appears to be independent of the daily dosage, but definitely related to the duration of therapy.

The duration of therapy varies. In 75 per cent or more of the cases with cavitation or caseous pneumonia streptomycin resistance will develop after one hundred and twenty days of treatment. Decreasing the interval to forty-two days will diminish the percentage to approximately 35. Other suggested methods of administration have been 1 Gm. every third day, or 1/3 of a gram daily in the hope of delaying development of resistance. The combined use of para-aminosalicylic acid (PAS) and streptomycin materially reduces the rate of resistance development, and also has a synergistic effect upon the tubercle bacillus. Dosage of PAS should be between 10 and 15 Gm. daily and dosage of streptomycin 1/2 to 1 Gm. daily. The toxic effect of PAS is mostly gastrointestinal, consisting of nausea and vomiting, which appear early and may subside. If not, the dosage may be diminished temporarily, discontinued temporarily, or administered in enteric-coated tablets, or granules, or in capsule form. Recently, the sodium salt has been made available commercially and is somewhat less irritating. PAS itself is bacteriostatic, not bacteriocidal. It exerts its effect on streptomycin-resistant strains equally as well as on streptomycin-sensitive strains, and thus far little has appeared in the literature about the development of resistance to PAS. It should not entirely replace streptomycin in streptomycin-sensitive cases, since it is not as potent as streptomycin. In streptomycin-resistant cases, it is of considerable value. Probably, the combination of streptomycin and PAS is the method of choice in all but streptomycin-resistant cases, in which PAS alone should be used.

Simultaneous administration of streptomycin and promizole in miliary and meningeal tuberculosis has been reported by Lincoln and Kirmse to be of considerable value. They reported a good survival rate in these conditions, 11 out of 13 in the miliary type, and 16 out of 21 in the meningeal type. Promizole is, however, somewhat toxic, and care must be taken in its use. The combination of streptomycin and PAS has been preferred by others in the treatment of miliary and meningeal tuberculosis.

In Europe, one of the thiosemicarbazone series called Conteben (Tibione, in this country) has been developed for use in pulmonary tuberculosis, and has been tried in combination with streptomycin. The action of this preparation appears similar to that of PAS, with a toxicity similar to the arsenicals. At present, PAS is preferable in combination with streptomycin.

Aureomycin

Aureomycin was first grown from the mold of Streptomyces aureofaciens by Duggan in 1948. It inhibits growth of both gram-negative and gram-positive bacteria and is active also against rickettsial and virus infections. It is of special value in: (1) atypical virus pneumonia, (2) the virus disease of ornithosis and psittacosis, (3) rickettsial diseases such as Rocky Mountain spotted fever and Q fever, (4) the bacterial pneumonias refractory to penicillin, such as those due to Staphylococcus aureus and Streptococcus faecalis, (5) brucellosis, in which it has been suggested as superior to the combination of streptomycin and sulfadiazine, (6) tularemia, (7) those spirochetal infections in which penicillin cannot be used, and (8) herpes zoster, in which it has diminished the duration and severity of symptoms. It is of debatable value in infectious mononucleosis, but a favorable chemotherapeutic effect on influenzal meningitis has recently been reported.

The oral method of administering aureomycin is the most convenient, and is preferred. The recommended dosage is 500 mg. every six hours until 30 to 50 mg.per kilogram of body weight per day has been given. For children or adults who cannot swallow capsules, the drug may be added to chocolate powder and given in milk or water. If necessary, aureomycin may be given intravenously, 30 to 50 mg. per kilogram per day, divided into

three doses and mixed with a special leucine diluent. When using aureomycin intravenously, however, the patient must be watched carefully since phlebitis may occur with this method.

As for mode of action, this antibiotic not only circulates in the extracellular elements of the tissues, but also has the ability to penetrate the endothelial cells, and to diffuse into the intracellular water of the tissues. This enables it to be effective against rickettsial and virus infections.

The toxic effects of aureomycin consist in nausea and vomiting in a considerable number of cases. They are probably not due to the antibiotic itself, but to some other factor present in the preparation of the mold. It is interesting to note that lately the preparation has had greater purity with a noticeable decrease in toxic symptoms. Simultaneous administration of aluminum hydroxide, milk or cottage cheese with the aureomycin has been found to diminish the occurrence of nausea and vomiting. Diarrhea occurs occasionally, and is probably a result of the disturbance of the bacterial flora of the colon produced by the aureomycin.

Chloromycetin or Chloramphenicol

This antibiotic was isolated by Ehrlich and Burkholder from the mold Streptomyces venezuelae in 1947, and at the present time can also be prepared synthetically. It is of value in the following infections: (1) rickettsial diseases, especially typhus fever, (2) the virus disease of ornithosis and psittacosis, (3) Salmonella infections, in which it may be superior to aureomycin, (4) atypical pneumonia, (5) Esch. coli infection, and (6) brucellosis. It has similar therapeutic effectiveness, but is probably preferable to aureomycin in typhoid fever, typhus fever, and the Salmonella group of infections. Aureomycin is probably preferable in atypical pneumonia, Rocky Mountain spotted fever, Q fever, ornithosis, psittacosis, and tularemic pneumonia. Both aureomycin and chloromycetin are equally effective in brucellosis.

A recent report of a severe epidemic of pertussis in Bolivia treated with chloramphenicol proved it to be of great value in this condition. The fever disappeared the second day of treatment, and a definite decrease in the number of paroxysms could be noted on the third day. After the sixth day, a slight cough alone remained in a few patients. A spot check by cough plate after one week revealed all cases free of infections.

Chloramphenicol is given by mouth in doses of 1 Gm. every six hours until the temperature drops to normal, and then 1/2 Gm. every six hours for two days following. Toxic reactions are rare. There are no reports of any that were serious. Nausea, vomiting and mild skin eruption occur, but to much less degree and not as frequently as with aureomycin. Occasionally, loose stools also occur as a mild complication. The mode of action of chloramphenicol is bacteriostatic. Like aureomycin, it penetrates to a cellular membrane of body tissues, and therefore can be effective against rickettsial and virus infections.

Newer Antibiotics

Neomycin is derived from the molds of Streptomyces fradie. Introduced by Waksman as superior to streptomycin, it has thus far been found too toxic to use clinically.

Polymyxin is derived from a soil organism, Bacillus polymyxa. There are several strains which have been confused with each other. The least toxic and most promising is polymyxin D. It is one of the most effective agents against gram-negative bacilli in vitro.

Streptothricin is derived from strains of Streptomyces lavendulae, and is valuable against fungi, but toxic when administered internally.

Tyrothricin is effective against gram-positive organisms, but can only be used topically since it causes a severe hemolytic anemia with internal administration.

Bacitracin is derived from strains of Bacillus subtilis. It is especially effective against gram-positive organisms topically, but because of toxicity to the kidneys, its internal use is limited.

Lastly, terramycin, produced by the growth of mold Streptomyces rimosus, has been introduced. Its sphere of usage appears similar to that of aureomycin with occasional gastrointestinal disturbances.

Summary

Treatment of diseases of the chest with penicillin, streptomycin, aureomycin, chloramphenicol (chloromycetin) and other newer antibiotics is discussed.

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The Causes of Embolism

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If one scans the English medical journals for the past eighteen months, he will find that well over 100 papers have been written on thromboembolic disease, and there are just as many in the foreign journals. It is evident at the outset, therefore, that the fundamental mechanisms and pathologic physiology are not yet fully understood.

In the great majority of cases, pulmonary embolism is caused by detached venous thrombi. Less common, but still well known, are emboli of air, oil and fat, and the rarer emboli of tumor tissue, bullets, amniotic fluid and meconium, paradoxic emboli, and foreign injected material such as penicillin-oil-beeswax.

Of the rare types, perhaps fat emboli have had less emphasis than they warrant. All are familiar with the fact that fat embolism occurs fairly often after fracture of the lower extremity, but it is doubtful if many physicians know that it also occurs following abdominal surgery. Robinson[1] recently reported 2 cases with which he had come in contact in his relatively short surgical experience. He stated that fat embolism following abdominal surgery is often misdiagnosed or overlooked because it is difficult to substantiate conclusively and because it is rarely considered.

The present day concept of this condition is that liquefied fat enters an open vein because of the negative pressure, but there is as yet no agreement as to whether the symptoms are due to the mechanical blocking or to the toxicity of the fatty acid. The symptoms, which start in from six to forty-eight or seventy-two hours postoperatively, consist of moderate cyanosis and dyspnea followed by a hyperpyrexia which may go as high as 107 F. The pulse is weak and rapid, and the blood pressure drops to alarming levels. There is restlessness, irritability, and finally delirium, coma and death. The diagnosis is made by finding fat in the urine, and it must be remembered that these fat droplets float and are therefore in the last few cubic centimeters of urine to leave the bladder. A differential diagnosis must be made between massive

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atalectasis, cerebrovascular accident and fat embolus. If the condition is fatal, the patient will usually die within the first ninety-six hours. Treatment is merely supportive and consists mainly of forcing fluids to increase the urinary output, since this is the mechanism of fat excretion from the blood stream.

Air emboli are not uncommon and should be kept in mind in a variety of relatively benign-appearing procedures. A number of cases have been reported associated with drawing blood for transfusion,[2] following spontaneous pneumothorax, during antral irrigation and during vaginal insufflation. It should also be remembered that the accidential surgical opening of any large vein containing a negative pressure may cause a fatal air embolus.

Embolism from amniotic fluid and meconium is fairly common because of the large open vessels and sinusoids following parturition, although only 16 cases have been reported in the literature so far.[3] This complication has been recognized only in the last few years, but it is of such importance that it has already been described in authoritative obstetric textbooks.

From the figures of the Chicago Lying-In Hospital over a period of the last nine years, Steiner and Lushbaugh[3] have estimated the incidence of fatal cases as being 1 in 8,000 deliveries. They found that pulmonary embolism by amniotic fluid was the commonest cause of death during labor and the first nine hours thereafter. In these cases, the cause of death is not obvious grossly at autopsy, and it is only on microscopic sections of the lungs that emboli consisting of meconium particles are found. As the condition becomes more widely recognized, the incidence may well prove to be much higher than is at present supposed.

Bullet or shell fragment emboli are extremely rare and only 9 cases are reported in the literature.[4] The bullet either lodges directly in the vessel or erodes into it, and the propagation depends on gravity, the position of the patient and the rate of blood flow.

Paradoxic emboli are by definition emboli that arise from a vein but lodge in a systemic artery instead of the pulmonary artery. To accomplish this, the embolus must pass through a septal defect in the heart, which is usually a patent foramen ovale. This type of embolus is also rare, Young, Derbyshire and Cramer[5] having recently reviewed the literature and found only 41 cases reported.

Fatal tumor emboli are not too rare, however, and a number of cases are reported in the literature.[6] These occur both spontaneously and when disturbed surgically.

The incidence of pulmonary embolus following venous sclerosing therapy is almost nil, Smith and Johnson[7] of the Mayo Clinic reporting only 17 cases with 1 fatality in a series of 11,700 cases treated in the period from 1927 to 1947. It should be remembered, however, that any injectable material such as venous sclerosing solution and penicillin-oil-wax may cause an unexpected and preventable death from pulmonary embolus.

In the great majority of cases, pulmonary embolism is caused by detached venous thrombi, but the exact cause of the formation of the thrombi is still a mystery. Many mechanisms for intravascular clotting have been postulated in the past, but at present only a few definite facts relating to the mechanism are known.

General Factors

The generalized factors which can cause intravascular coagulation have been pretty well agreed upon as (1) damage to the vascular endothelium, (2) stasis of blood, and (3) a hypercoagulable state of the blood. Damage to the vascular endothelium may occur by direct trauma, inflammation, or ischemia of the vessel wall. Here the plasma thromboplastin becomes active, tissue thromboplastin in the wall of the vein seeps through and initiates clotting, and because of the small amount of fibrin formed, the platelets stick there and accelerate the clot formation. Two types of clot are recognized, the white clot, which is the result of vascular endothelial damage, and the red clot, which accounts for the great majority of emboli. The white, or fibrin, clot is firmly attached to the wall of the vessel and becomes endothelialized in about five or six days. The red clot is loosely attached to the wall of the vessel and is propagating in nature, extending for great distances as a floating clot. This type of clot is not easily endothelialized and causes emboli because it is easily broken off by the more rapid blood flow when it reaches a larger vein or from increased venous pressure produced by the Valsalva maneuver, such as occurs in coughing.

It has been established by Hunter, Sneeden, Robertson and Snyder[8] and by others that known damage to the vascular endothelium, such as occurs with thrombophlebitis, accounts for less than 10 per cent of the fatal pulmonary emboli; so one must look for other more important causes.

The second general factor, stasis of blood, has

long been associated with the production of phlebothrombosis and subsequent embolism. Factors which favor stasis[9-13] are slowing of blood flow, periods of hypotension, vasoconstriction, polycythemia, fluid or plasma loss, decreased skeletal muscle tone, depression of respiration, localized pressure points, varicosities, and anything causing sludging of red blood cells.

Postoperative bed rest and medical bed rest of long duration certainly decrease skeletal muscle tone, slow the blood flow and create localized pressure points that generally produce stasis of the blood and favor thrombus formation. These conditions may also produce fluid and plasma loss and depression of respiration, and generally lead to sludging of red blood cells.

It has been well established that the site of bland thrombus formation productive of the majority of pulmonary emboli is in the deep veins of the calf and of the foot. Hunter, Krygier, Kennedy and Sneeden[14] found thrombosis of the lower extremities in more than 50 per cent of persons dying of any cause in the latter half of life. By leg exercise they were able to reduce this figure to just under 20 per cent.

At present probably the greatest single factor known favoring thrombus formation is the sudden confinement to bed of a previously ambulatory older patient without the benefit of active exercise. Although this is an important factor, stasis is not the true cause of thrombus formation since Miller and Rogers[15] showed as far back as 1929 that a stationary column of blood in a vein or artery after two carefully applied aseptic ligatures may remain fluid for weeks in a living human.

Clinical factors increasing thromboembolism are heart disease, major operations, severe injuries, obesity, cold weather, other vasospastic influences, and debility.

The third general factor, a hypercoagulable state of the blood, has been postulated by many different investigators. They have ascribed this to drugs, excessive smoking, the surgical liberation of tissue factors and many other causes. Various investigators have shown an increase in the prothrombin, a decreased coagulation time, an increase in platelets, or more adhesiveness to platelets, but these are difficult to measure, and it has still not been definitely proved that any of them exist as a generalized factor in thromboembolic disease. This lack is attested by the fact that there is as yet no test which can predict the formation of thromboemboli.

Perhaps the most well known fact of all concerning the occurrence of thromboembolism is that its incidence is much greater in persons over 40 years of age. It is known that thrombosis occurs in over 50 per cent of the middle-aged or older patients forced to bed, but there is only the inadequate fact of stasis to point to as the etiologic factor. It has already been shown that this alone is not enough to cause intravascular clotting.

Another less well known fact is that pulmonary embolism is not purely a surgical complication, as one would be led to believe from the literature on the theory that surgical trauma liberates factors causing a hypercoagulable state in the blood. On the contrary, Carlotti, Hardy, Linton and White[16] have shown that pulmonary embolism is actually more common in medical than surgical patients. In their medical patients, 65 per cent had cardiac disease, especially the rheumatic, hypertensive and coronary forms. Congestive failure was frequent as a background, and auricular fibrillation was present in nearly one third of the patients. Of these patients, 83.3 per cent were over 40 years of age, and over half of them were from 50 to 70 years of age.

Ochsner[17a,b] has repeatedly stated that the precipitating cause of thromboembolic phenomena is blood stasis, but it is hard to explain the fact that emboli are extremely rare in paraplegic and tetraplegic patients and in patients with tuberculosis. Cook and Lyons[18] showed that in a series of cases of patients with paralyzed legs for a total period of 115 man years, there were no instances of pulmonary embolism despite the stasis and the fact that these patients had been subjected to 175 surgical procedures. The blood of these patients contained sufficient quantities of all the factors to cause normal clotting. There were blood stasis, surgical trauma, repeated infections, general debilitation, and in tetraplegic patients even the loss of primary muscles of respiration, all of which favor thromboembolism. The average age of the patients, 26.1 years, was the only factor unfavorable to the development of emboli. Fox, Robitzek, Bernstein and Bobb[19] reported only 30 cases of pulmonary infarction in twelve years at a tuberculosis hospital covering some 24,263 admissions. Twelve of the infarctions were fatal and were among the 22 found in 2,182 necropsies done there. Their conclusion was that bed rest was not a factor in the production of embolism. Here again, the majority of the cases were in the younger age group. In this connection, Cook and Lyons[18] pos-

tulated that the influence of advancing age on thromboembolism may be the concomitant decrease in the human source of heparin, the mast cells.

de Takats[20a] has shown by a simple clotting mechanism test that people react differently to heparin. There are hyporeactors, normoreactors and hyperreactors. He found that in the early postoperative period, that is the first two or three days, patients were somewhat heparin-resistant. In his latest monograph[20b] he stated that a decreased response to heparin is found also with age, acute thrombosis, dehydration, hemoconcentration, polycythemia, hyperlipemia, carcinomatosis, and when digitalis and epinephrine are used.

Although many authors continue to write on the thromboembolic problem, most of the papers and investigation are concerned with treatment of the disease and only a few with determining the etiology. Even the incidence of pulmonary embolism, as reported from studies on consecutive necropsy material, varies from 2.07 per cent to 6.8 per cent.[21, 17b] An attempt to correlate and explain the difference in occurrence seems almost hopeless when Allen[22] reports 26 fatal emboli in a series of 458 surgical cases and Zimmerman, Miller and Marshall[22] find only 43 fatal emboli in 152,371 cases of major operations over a seventeen year period, as proved by consecutive autopsy material.

Admittedly, this is a difficult problem because of the inability to diagnose these cases clinically. Yet it would seem that studies of necropsy material under an accepted and standardized technic should at least establish a comparable incidence of the disease.

Summary

The great majority of emboli are caused by detached venous thrombi arising from the deep veins of the calf of the legs and deep veins of the feet.

Emboli are as common medically as surgically, or more so.

The two main etiologic factors known today are age and blood stasis.

Proof of a hypercoagulable state of the blood causing thromboembolism is still lacking. There is no blood test which will determine a tendency toward the production of embolism.

The reported incidence of embolism still shows a wide variation.

Of the rarer types, air emboli, fat emboli, and amniotic fluid and meconium emboli are being diagnosed with more frequency.

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ABSTRACTS OF MEDICAL ARTICLES

INCIDENCE AND SIGNIFICANCE OF THROMBOEMBOLISM IN PULMONARY TUBERCULOSIS. By Russell S. Jones, Thomas C. Black, and Harold A. Sparr. Am. Rev. Tuberc. 61:826-834 (June) 1950.

It is the purpose of this paper to indicate greater frequency of pulmonary thrombotic emboli in pulmonary tuberculosis than is generally believed, the importance of small emboli lodging in the arteries of the good pulmonary tissue in cases of pronounced pulmonary tuberculosis, and the rarity of infarction associated with these emboli. Eleven examples of pulmonary thromboembolization were found on careful postmortem examination of 60 consecutive tuberculous male patients with an incidence of 18.33 per cent. The emboli in these patients lodged in the arteries supplying the good pulmonary tissues and away from the areas of the main tuberculous involvement. In only one instance were the pulmonary emboli associated with infarction.

The high incidence of pulmonary thromboembolism in this series is attributed to the careful dissection of the lung rather than a review of protocols, the extensive pulmonary tuberculosis with cor pulmonale in 5 of the 11 cases, inadequate fluid intake in seriously ill patients, and age over 40 years in 9 of the 11 cases.

Other factors in venous thrombosis are outlined and the possible relationship of reduced blood volume in chronically ill patients is discussed.

INSULOGENIC LIPODYSTROPHIES, THEIR RELATIONSHIP TO "BRITTLE" DIABETES AND TO INSULIN RESISTANCE. By Carlos P. Lamar, M.D. J. A. M. A. 142:1350-1353 (April 29) 1950.

In the series of 4 cases of insulin lipodystrophy presented there are 2 in which only atrophic lesions were present, and 2 in which the lesions were in hypertrophic and/or inflammatory stages, with atrophic areas elsewhere in 1 of these. In both types of cases insulin requirements seemed to have increased after the development of the local lesions, and local changes seemed to have interfered with absorption of the insulin.

Dr. Lamar concluded that insulin lipodystrophies are probably due to repeated trauma at the site of the injections of insulin in susceptible persons, plus a personal factor, probably related to the chemistry of allergy and to metabolic disorders of hepatic function. He was of the opinion that in some instances insulogenic lipodystrophies of the atrophic type interfering with the continuous absorption of insulin from each depot injected may cause "insulin resistance." He also explained the probable mechanism of production of some cases of so-called "brittle" diabetes, with hyperglycemia and glycosuria occurring when some insulin remains unabsorbed for a certain period of time in the hypertrophic nodular type of insulogenic lipodystrophies, only to be added to the daily supply at a later date when it eventually becomes absorbed from these nodules. This would produce great variations in glycemia from extremely high to extremely low levels.

Systematic diversification of the site of insulin injections as a routine part of the patient's initial training is advocated. The "6 by 8" scheme is described as an easy method for instructing diabetic patients and impressing them with the importance of continuous systematic selection of insulin injection sites in order to prevent the occurrence of insulogenic lipodystrophies.

A ROENTGEN STUDY OF MUSCLE TUMORS PRIMARY IN THE LUNG. By Robert S. Sherman, M.D., and Bert H. Malone, M.D. Radiology 54:507-515 (April) 1950.

A series of 7 cases of myogenic tumor primary in the lung, studied roentgenologically and proved histologically at Memorial Hospital in New York, is presented. In these cases 4 of the tumors were myomas and 3 were myosarcomas, tumors which appear alike roentgenologically.

The authors noted that bronchogenic carcinoma of the nodular form, single carcinoma or sarcoma metastases, bronchial adenoma, tuberculoma, hamartoma, and cysts are chief among the conditions resembling myogenic tumors of the lung in certain cases. They concluded that while an unequivocal diagnosis of myogenic tumor is not possible roentgenologically, the possibility of the diagnosis is to be considered when a certain shadow pattern is encountered in the chest film.

THE TREATMENT OF BACTERIAL ENDOCARDITIS. By Edward S. Orgain, M.D., F.A.C.P., and Charles K. Donegan, M.D. Ann. Int. Med. 32:1099-1113 (June) 1950.

A series of 138 cases of bacterial endocarditis, representing the total experience of the Duke Hospital with this disease, is presented. Analysis is made on the basis of three therapeutic periods: the presulfonamide period (1930 to 1937) with 41 cases and 1 survival; the sulfonamide period (1938 to 1943) with 41 cases and a recovery rate of 10 per cent; and the penicillin period (1944 to 1947) with 37 of 44 patients receiving penicillin and cure in 54 per cent.

The details of therapy are discussed with particular reference to daily and total dosage of penicillin, routes of administration, penicillin resistance, duration of therapy, and the causes of treatment failures. A comprehensive review of the literature and their own experience led the authors to conclude: (1) Adequate daily dosage of penicillin is of paramount importance and depends to a large extent upon the sensitivity of the organism, which may be determined by preliminary in vitro studies. If the organism proves sensitive, therapy should begin at not less than 500,000 units of penicillin per day, and if resistant, not less than 1,000,000 units per day. (2) The various technics of administration have not demonstrated any individual superiority. (3) Anticoagulant therapy has not altered the final therapeutic results and is potentially dangerous. (4) The duration of treatment should extend for at least four to six weeks initially and longer if a relapse occurs.

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Sixth—Leldon W. Martin, M.D...6-52.....*Sebring*
Seventh—Adrian M. Sample, M.D...7-52...*Fort Pierce*
Eighth—S. Marion Salley, M.D...8-51.....*Miami*

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Joshua C. Dickinson, M.D., Alternate.....*Tampa*
(Terms expire Dec. 31, 1951)
Homer L. Pearson, Jr., M.D., Delegate.....*Miami*
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(Terms expire Dec. 31, 1952)

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February Anniversaries

In reviewing historic medical events which happened in the month of February, we find that on Feb. 11, 1752, the first patients were admitted to America's first voluntary hospital, Pennsylvania Hospital of Philadelphia, under the direction of Benjamin Franklin and Thomas and Phineas Bond. In his newspaper, by personal solicitation and also by petitioning the assembly, Mr. Franklin asssisted in raising funds for the hospital. "I do not remember," he wrote, "any of my political manoeuvres the success of which . . . gave me more pleasure."

On Feb. 13, 1843, Oliver Wendell Holmes read his epoch-making essay on the "Contagiousness of Puerperal Fever." In it he traced the transmission of the fever from cases of erysipelas and from a physician who had conducted a postmortem examination. Dr. Holmes wrote: "No negative facts, no passing opinions, be they what they may or whose they may, can form any answer to the series of cases now within the reach of all who choose to explore the records of medical science."

En route to England on Feb. 21, 1941, Sir Frederick Grant Banting of Toronto, Canada, died as the result of an airplane crash. Years earlier, while writing a lecture on diabetes, Dr. Banting had conceived a method for preparing an active extract of the islands of Langerhans. He had then obtained the support of Professor J. J. R. Macleod of the University of Toronto, with the result that insulin was isolated and the treatment of diabetes mellitus revolutionized. Drs. Banting and Macleod were given the Nobel Prize in 1923, an award which they divided with their co-workers, C. H. Best and J. B. Collip.

Showered with honors, Dr. Banting remained the modest, shy, doggedly persevering scientist. These words reveal his philosophy of life: "I am a firm believer in the theory that you can do or be anything that you wish in this world, within reason, if you are prepared to make the sacrifices, think, and work hard enough and long enough."

Under Two Flags "Mobilize for Mercy"

Beside the Stars and Stripes flies the Red Cross flag of mercy — the two as inseparable in national emergencies as on the battlefield. When war erupts, when nature goes on a rampage, we Americans naturally turn to our American Red Cross, which, in the words of General Eisenhower, is "the warm heart of a free people."

"Mobilize for Mercy" is the slogan for the March 1951 campaign. This year the Red Cross asks every one of us to help supply the funds badly needed for its expanded work for the armed forces and civil defense, and also to aid in recruiting volunteers to make this work possible. Not only must it make provision for continuing its regular work, but it must accept heavy new responsibilities.

The Secretary of Defense has designated the American Red Cross the official blood procurement agency for the needs of the armed forces.

The National Security Resources Board also has requested that this organization coordinate a nationwide blood program for civil defense. With these new tasks added to its regular peacetime program, it is taking over the responsibility for procuring large quantities of blood.

Another herculean undertaking confronts the "Old Reliable," as the Red Cross appropriately has been called. Again at the direction of the National Security Resources Board, it must train as many as 20 million persons in first aid, including all civil defense workers. Success hinges upon cooperation of the public, both in filling and helping to instruct the classes.

Recruiting and training great numbers of women in home nursing courses and as nurse's aides is a third new responsibility delegated to the Red Cross by the National Security Resources Board. It is anticipated that in an emergency hundreds of thousands of women will have to give nursing care to their families and their neighbors. More hundreds of thousands will be needed to serve as nurse's aides in hospitals, at blood centers, and in emergency shelters. It is planned to offer home nursing instruction to 700,000 persons this year.

This expanded program calls for millions of volunteers — blood donors, nonprofessional workers in hospitals, drivers for Motor Service, and other workers — to meet all local chapter needs. If the Red Cross is to realize adequately on its long history of trained volunteer service, if the Red Cross know-how is to be utilized fully in 1951, this indispensable American institution must have generous support from citizens everywhere in all walks of life. How much will you give to keep America's other flag flying?

No Bargain, Indeed! Labor Speaks Out

"I am against socialized medicine. So is the organization which I have the honor of heading. . . Any way you look at it, socialized medicine is no bargain and the carpenters want none of it." In these words William L. Hutcheson, General President of the United Brotherhood of Carpenters & Joiners of America and Vice President of the American Federation of Labor, expressed the position of his labor group on the National Health Program. His message was to the House of Delegates of the American Medical Association and the Third Annual Conference of the A. M. A. National Education Campaign, meeting jointly in Cleveland last December. This action marks the first time a major labor organization has spoken out against socialized medicine.

As refreshing as an ocean breeze was the forthright address of this outstanding labor leader, who saluted the physicians of this country not only as doctors but as crusading citizens, willing to fight for their convictions, beside whom he was happy to take his stand. Not averse to saving a dollar, he, in fact, likes to get as much for his money as the next man. That, he explained, is one of the reasons why he is opposed to socialized medicine. "It looks cheap the way the backers present it, but when you dig down under the fancy layer of propaganda frosting you find that it can be mighty expensive. The British people have already discovered this fact."

He cited data from the International Labour Office stating that the 1950-1951 estimated cost of Britain's National Health Service is 484 million pounds, in contrast to an estimated 167 million pounds a year in 1946 when the health legislation was passed. Too, for all the planning that has been done, there are twice as many patients per doctor in London's inner East End as in certain wealthier districts, reflecting an uneven distribution of doctors which only compulsion can remedy.

Mr. Hutcheson observed that when government is given authority to tell one group or one profession where and how its members are to work, no other group or profession can be safe for long. Wisely he reasoned:

> If the day ever comes to America when Uncle Sam usurps the power to dictate to doctors under a health plan, it will be a sad day for carpenters. Adequate housing is still an unsolved problem in this country, especially for the poor. If it is logical to nationalize the medical profession to get more medical service for the poor, it is equally logical to nationalize the home construction industry to get roofs over the heads of the lower income groups.
>
> I do not know much about doctors, but I know quite a bit about carpenters. They are an independent lot. They want to work where and how they please. The first bureaucrat who told a carpenter he had to work in Little Rock when he wanted to work in Lancaster would be gumming his food for lack of teeth. Carpenters want to be free agents; free to work where they want to; free to negotiate the terms of their wages and working conditions through collective bargaining; yes, even free to leave the industry and try their luck at something else if the spirit moves them.
>
> They will retain these freedoms only so long as all other groups retain theirs. Socialization is like a wolf with a tapeworm; once it starts gnawing, it never can stop. Socialized medicine would only be the first bite out of our free enterprise system; it would not be many years before the carpenters would be feeling the teeth of socialization on the seats of their overalls. . . .
>
> Perhaps if human nature were less ornery and less

avaricious, an idealistic health program might work out all right. But so long as people have preferences, so long as Park Avenue has more appeal than Hell's Kitchen, there will be an uneven distribution of doctors under any plan that does not contain compulsion. And once compulsion enters the picture, the rights and freedoms of all citizens stand in jeopardy. To me, it is as simple as that.

The medical profession warmly welcomes Mr. Hutcheson and his carpenters as co-laborers in the cause of freedom. Congratulations to him for his perspicacity, forthrightness and courageous leadership.

Physicians, the Press and the Public

It is an ironic fact that the medical profession, which has done so much to deserve the gratitude of mankind, is now fighting a battle for survival. Inadequate public relations — failure of the profession to get the story of its accomplishments across to the public — must be largely responsible for the profession's plight.

The public's growing interest in medical affairs now presents an opportunity for getting the profession's message to the people. Great care must be exercised, however, to release the right type of news and to present it accurately. The honest newspaper man and physician are quite aware of the sharp line that must be drawn between education of the public and use of public information to promote the practice of an individual physician.

In the Chicago Medical Society Bulletin for June 17, 1950, Arthur J. Snider, science editor of the Chicago Daily News, ably discusses problems of medical-press relations. He warns against news distortion and premature publication, and shows the need for presenting research in proper perspective.

The National Association of Science Writers is to be commended for its efforts to obtain better reporting of medical science news. Each member of the association is proud of his reputation and endeavors to enhance it in the eyes of the medical profession.

The section on educational information in the revised ethical code encourages members of the medical profession "to write, act or speak for general readers or audiences." The physician should, therefore, discard his historic antipathy toward publicity and cooperate wholeheartedly in creating better public relations between the profession and the public.

Hospital Firsts

Joseph Nathan Kane in "Famous First Facts" and "More First Facts" presents "Famous Hospital Firsts:"

The first voluntary hospital in America was the Pennsylvania Hospital, established in Philadelphia in February 1752.

The first marine hospital was the Norfolk Naval Hospital at Norfolk, Va., deeded to the United States government on April 20, 1801, by Governor James Monroe of Virginia.

The first children's hospital was opened in 1854 in New York City and was known as "The Nursery and Child's Hospital."

The first woman's hospital was Woman's Hospital of New York City. In 1855 thirty women formed the "Women's Hospital Association" and adopted a constitution. There was opened on May 4, 1855 at Madison Avenue and Twenty-Ninth Street the first hospital in the world founded for the exclusive use of women.

The first babies' hospital, designed exclusively for infants, was Babies Hospital of the City of New York, chartered June 23, 1887.

The first cancer hospital was the New York Cancer Hospital, which was opened Dec. 6, 1887.

The first leper hospital was the Louisiana Leper Home at Carville, La., founded in 1894 by an act of the Louisiana legislature. The home was purchased by the federal government in 1921 and is now operated by the United States Public Health Service.

The first state tuberculosis sanatorium was the Rutland (Mass.) Sanatorium, opened Sept. 23, 1898.

Not included in Mr. Kane's list and known to but few persons is the fact that the first hospital building in territory now comprising the United States was an institution of "decent appointments" with six beds, named Santa Barbara and constructed in St. Augustine by Spanish Governor Canço in the year 1599. It was constructed "after the monks, whose monastery burned March 14, 1599, had moved into the hermitage of Nuestra Señora de la Soledad, where the hospital had previously been."

The editorial staff of The Journal plans to present more about this Florida hospital of three and a half centuries ago in a later issue.

Physicians and Pharmacists Get Together

Getting physicians and pharmacists together as a body through organization has been needed for a long time. How to go about meeting this need was a problem which defied solution. The physician did not like to be told that he was remiss in this particular, and neither did the pharmacist.

During the last year, however, real progress has been made. The threat of Socialism, the rising cost of medical care, and an aroused public have increased the need for cooperation between physicians and pharmacists.

Dr. Henry J. Peavy, Chairman of the Committee on Interrelationship of the Florida Medical Association, and Dr. Perry A. Foote, Dean of the College of Pharmacy of the University of Florida and Director of its Bureau of Professional Relations, are strong proponents of cooperation between the professions. Their efforts indicate, however, that the task probably should not be undertaken primarily from the state level.

During the last few months several local organizations, stimulated by the Bureau of Professional Relations of the College of Pharmacy, have formed joint committees on interprofessional relations. A few local physicians who are deeply interested in this program are asking their county societies to appoint three physicians from their respective groups to serve in this capacity. One physician was so interested that he asked permission to speak before the pharmacy district group on the importance of such cooperation between physicians and pharmacists.

It is highly desirable that, in the immediate future, local groups have committees on interprofessional relations actively engaged in solving the problems in their respective areas. These local committees then could take their more difficult problems to a commmittee organized on a statewide basis. Organization in this manner should bring real cooperation between members of the two professions in solving their mutual problems and should serve as a constructive force for the betterment of both physicians and pharmacists.

Your March Journal will contain the complete program for the Seventy-Seventh Annual Meeting at Hollywood — April 22-25.

YOUR BLUE SHIELD

For Prompt Payment

The primary objective of the Blue Shield Case Department is to extend benefits to subscribers and to make settlement to participating physicians on all authentic cases in the fastest and most efficient way possible.

The participating physician benefits by the prompt disposition of Blue Shield cases, whether the case be approved for payment or disapproved. It goes without saying that the physician benefits by the prompt payment on a Blue Shield case, however, when a case must be disapproved by the Plan and the physician is promptly notified, he benefits by this action, insofar as he is notified in sufficient time to make other financial arrangements with the patient.

Complete Information Necessary

The one determining factor in the prompt disposition of a Blue Shield case is the completeness with which the Doctor's Service Report is filled out. A Doctor's Service Report containing all the necessary information can be immediately processed, but a report lacking the required information must be "pended" for further information and usually involves much time-consuming correspondence between the Plan and the physician, causing a delay in the final action taken on the case.

Of particular importance in completing the Doctor's Service Report are the number of the subscriber's contract, code number for the surgical procedure performed and the participating physician's code number. A numerical system of maintaining its records was adopted by the Plan in the interest of greater efficiency, economy and speed, and while use of numbers facilitates the processing of a case, the omission of these numbers very often makes it impossible to process a case without entering into correspondence with the doctor.

All Information Important

Although much of the information required on the Doctor's Service Report may not appear to be pertinent to the case in question, it should be pointed out that the Doctor's Service Report serves several purposes. Its primary purpose is for the reporting of services rendered Blue Shield members, however, it is also used as a source of information for statistics of all kinds necessary for the management and future planning of Blue Shield and therefore should be complete in every detail.

STATE NEWS ITEMS

Dr. George F. Schmitt of Miami recently addressed the local obstetrical and gynecological society on the subject of diabetes in pregnancy.

Dr. William H. McCullagh of Jacksonville has been elected vice-president of the Southern Psychiatric Society.

Dr. Jere W. Annis of Lakeland recently addressed the local Rotary Club on the subject of heart diseases.

Dr. J. K. David, Jr., of Jacksonville has resumed his practice following visits to clinics in New York City in December.

Dr. Walter W. Sackett, Jr., of Miami, Florida delegate to the American Academy of General Practice, has been appointed to that Society's nominating committee.

Dr. Wilson T. Sowder of Jacksonville was a featured speaker at a meeting of the Duval Chapter of the Florida Heart Association in November.

Dr. Bernard J. McCloskey of Jacksonville recently addressed the local Catholic Woman's Club on the subject "The Challenge of Cancer."

Dr. Erasmus B. Hardee of Vero Beach, chairman of the committee on Tuberculosis and Public Health, recently addressed a meeting of the State Tuberculosis Board held in Orlando. Dr. Hardee's discussion was based on the results of a questionnaire prepared by the Florida Medical Association and sent to all Florida hospitals.

The National Conference on Rural Health, sponsored by the A.M.A. Committee on Rural Health, will hold its sixth national conference in Memphis, February 23-24, in the Peabody Hotel.

The program is built around the planning and organization of health councils. The entire program will consist of general sessions rather than a series of small groups as in previous conferences. For additional information, write Dr. F. S. Crockett, 300 Main St., Lafayette, Indiana.

Any member contemplating attending this conference is requested to make reservations with the Peabody Hotel.

A copy of the 1951 F.M.A. Directory has been mailed to each active member of the Association.

Dr. Marlin C. Moore was the guest speaker at the November meeting of the Jacksonville Woman's Club.

Dr. John D. Milton of Miami has been appointed by President White to replace Dr. W. Duncan Owens, formerly of Miami Beach, on the Board of Governors. Dr. Owens recently resigned, having moved from the state.

Dr. Russell B. Carson of Ft. Lauderdale has been appointed by President White to replace Dr. W. Duncan Owens of Miami Beach, recently resigned, on the Committee on Legislation and Public Policy.

Dr. Fred E. Brammer of Dania on November 13 talked to the local Rotary Club on the history, symptoms, diagnosis and treatment of diabetes.

The following members of the Association attended the A.M.A. Clinical Session at Cleveland, December 5-8: Drs. Richard A. Mills, Ft. Lauderdale; John M. Malone, Green Cove Springs; Louis J. Polskin, Lakeland; Harry F. Rolfes, Lake Wales; Reuben B. Chrisman, Jr., Joseph S. Stewart, Miami, and representatives to A.M.A. House of Delegates Homer L. Pearson, Jr., Miami, and Louis M. Orr, II, Orlando.

Dr. Joseph S. Stewart of Miami, chairman of the Committee on Public Relations, represented the Association at the annual A.M.A. Public Relations Conference held in Cleveland, December 3-4. Others attending this conference include Dr. Homer L. Pearson, Jr., Dr. Reuben B. Chrisman, Jr., and Mr. W. Harold Parham.

Dr. Joseph S. Stewart of Miami officially represented the Association at the A.M.A. National Education Campaign Conference held in Cleveland, December 7. A.M. A. delegates Drs. Homer L. Pearson, Jr. and Louis M. Orr, II; Dr. Reuben B. Chrisman, Jr., and Mr. W. Harold Parham also were in attendance.

The American College of Allergists will hold its seventh annual meeting at the Edgewater Beach Hotel, Chicago, February 12-14. Numerous sectional meetings will be held on various aspects of allergy under the leadership of eminent allergists from the East and Middlewest.

Immediately preceding the annual meeting, on February 9-11 the College's annual post collegiate instructional course will be held. For further information, write Fred Wittich, M.D., Secretary-Treasurer, American College of Allergists, LaSalle Medical Building, Minneapolis, Minnesota.

BIRTHS AND DEATHS

Births

Dr. and Mrs. Floyd L. Pichler of Jacksonville announce the birth of a daughter, Deanna Lynn, on Nov. 23, 1950.

Dr. and Mrs. Donald P. White, Jr., of Jacksonville announce the birth of a daughter, Sherry, on Dec. 3, 1950.

Dr. and Mrs. George P. Beach of Jacksonville announce the birth of a son on Dec. 1, 1950.

Deaths — Members

Lippincott, Leon S., Daytona Beach.....Nov. 25, 1950
Ely, Reuel A., Tampa.....Dec. 28, 1950
Horne, Lester W., St. Petersburg.....Dec. 29, 1950

Deaths — Other Doctors

MacConnell, John W., Davidson, N. C.....Sept. 26, 1950
O'Hara, Fred S., Springfield, Ill.....Oct. 1, 1950

NEW MEMBERS

The following doctors have joined the State Association through their respective county medical societies.

Atkinson, Horace D., St. Petersburg
Groskloss, Howard H., Miami
Hernandez, M. S., Miami
Howard, Harvey J., Clearwater
Humes, Karl T., Bushnell
Karaphillis, John T., Clearwater
McCorkle, James K., St. Petersburg
Manheimer, Leon H., Miami Beach
Ruhl, Frank G., Jr., Miami
Spoto, Joseph S., St. Petersburg
Stemerman, Irving, Miami
Wager, Harold E., Panama City

COMPONENT SOCIETY NOTES

Alachua

At the regular monthly meeting of the Alachua County Medical Society officers for 1951 were elected as follows: Dr. James M. McClamroch, president; Dr. Henry J. Babers, Jr., president-elect; Dr. F. Emory Bell, vice-president, and Dr. Henry H. Graham, secretary-treasurer, all of Gainesville.

Bay

The 1951 officers of the Bay County Medical Society were elected at the regular December meeting. They are Dr. James M. Nixon, president; Dr. Amsie H. Lisenby, vice-president, and Dr. Harold E. Wager, secretary-treasurer, all of Panama City.

Brevard

At the regular December meeting of the Brevard County Medical Society officers were elected for the year 1951. Dr. Allen E. Kuester of Cocoa was elected president, Dr. James A. Sewell of Melbourne was elected vice-president, and Dr. Theodore J. Kaminski of Melbourne was re-elected secretary-treasurer.

Broward

Dr. M. Austin Lovejoy was elected president of the Broward County Medical Society for 1951 at the regular December meeting. Other officers for the year include Dr. Lloyd U. Lumpkin, president-elect; Dr. Frederick J. Driscoll, vice-president; Dr. Thomas L. Roberts, Jr., secretary, and Dr. Julius F. Boettner, treasurer. All 1951 officers are from Ft. Lauderdale.

Columbia

The list of 1951 officers for the Columbia County Medical Society appeared in the January issue of The Journal.

Dade

Dr. Jack Q. Cleveland of Coral Gables will serve as president of the Dade County Medical Association for 1951. Dr. Ralph S. Sappenfield of Miami was elected president-elect. Other officers for the coming year which were elected at the regular December meeting include Dr. Charles R. Burbacher of Coral Gables, vice-president; Dr. Reuben B. Chrisman, Jr., of Miami, secretary, and Dr. Raymond L. Evans of Miami, treasurer.

DeSoto-Hardee-Highlands-Glades

Officers of the DeSoto-Hardee-Highlands-Glades County Medical Society for 1951 are Dr. Hubert W. Coleman of Avon Park, president; Dr. Carl J. Larsen of Avon Park, vice-president, and Dr. Edwin C. Northup of Avon Park, secretary-treasurer.

Duval

At the regular December meeting of the Duval County Medical Society, the 1951 officers were elected. They are Dr. Charles F. Henley, president; Dr. Ferdinand Richards, president-elect; Dr. John F. Lovejoy, vice-president; Dr. C. Burling Roesch, secretary, and Dr. G. Dekle Taylor, treasurer, all of Jacksonville.

Escambia

Officers elected to serve the Escambia County Medical Society for the year 1951 at the December meeting are Dr. Lee Sharp, president; Dr. Alvin L. Stebbins, vice-president, and Dr. Arthur J. Butt, Jr., secretary-treasurer, all of Pensacola.

Franklin-Gulf

At its regular December meeting, the Franklin-Gulf County Medical Society elected the following officers to serve during 1951: Dr. William P. Blackmon, Apalachicola, president; Dr. James A. Steely, Apalachicola, vice-president; Dr. Albert L. Ward, Port St. Joe, secretary-treasurer.

Hillsborough

The 1951 officers of the Hillsborough County Medical Association were elected at the regular meeting in December. They are Dr. R. Renfro Duke, president; Dr. Sherman B. Forbes, president-elect; Dr. Edward F. Carter, Sr., vice-president; Dr. James N. Patterson, secretary, and Dr. Joseph A. Pendino, treasurer, all of Tampa.

Indian River

The following members were elected officers for 1951 at the regular meeting of the Indian River County Medical Society in December: Dr. Erasmus B. Hardee, president; Dr. James C. Robertson, vice-president, and Dr. William L. Fitts, 3rd, secretary-treasurer, all of Vero Beach.

Jackson

The following officers for 1951 were elected by the members of the Jackson County Medical Society at the December meeting: Dr. Jasper B. Dowling of Altha, president; Dr. William R. Wandeck, Marianna, vice-president, and Dr. Francis M. Watson of Marianna, secretary-treasurer.

Lake

At the December meeting of the Lake County Medical Society, officers for 1951 were elected. Dr. H. Durham Young, Jr., of Leesburg was elected president, Dr. Louis R. Bowen of Eustis, vice-president, and Dr. Lawton F. Douglass of Eustis, secretary-treasurer.

Lee-Charlotte-Collier-Hendry

Officers elected to serve the Lee-Charlotte-Collier-Hendry County Medical Society during 1951 include: Dr. William H. Grace, president; Dr. Ernest Bostelman, vice-president, and Dr. Angus D. Grace, secretary-treasurer, all of Ft. Myers.

Leon-Gadsden-Liberty-Wakulla-Jefferson

Dr. John T. Benbow of Chattahoochee is the newly-elected president of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society. Dr. Ernest W. Ekermeyer of Tallahassee was elected vice-president and Dr. Charles F. James, Jr., of Tallahassee was elected secretary-treasurer.

Manatee

At the regular December meeting of the Manatee County Medical Society, the following officers were elected for 1951: Dr. Roderic O. Jones, president; Dr. John E. Granade, vice-president, and Dr. Marjorie L. Warner, secretary-treasurer, all of Bradenton.

Marion

The 1951 officers of the Marion County Medical Society were elected at the regular December meeting. Dr. Richard C. Cumming was re-elected president, and Dr. Bertrand F. Drake was re-elected secretary-treasurer. Dr. John P. Moore was elected vice-president. All officers reside in Ocala.

Monroe

Dr. Ralph Herz of Key West is the newly-elected president of the Monroe County Medical Society and will serve during the year 1951. Dr. Herman K. Moore of Key West was elected secretary-treasurer.

Nassau

Dr. David G. Humphreys was re-elected president of the Nassau County Medical Society for 1951 at the December meeting. Dr. Benjamin F. Dickens was elected vice-president and Dr. John W. McClane was re-elected secretary-treasurer. All three officers are from Fernandina.

Pasco-Hernando-Citrus

The following officers for 1951 were elected at the regular December meeting of the Pasco-Hernando-Citrus County Medical Society: Dr. Gail M. Osterhout of Inverness, president; Dr. Donald G. Bradshaw of Zephyrhills, 1st vice-president; Dr. George R. Creekmore of Brooksville, 2nd vice-president, and Dr. W. Wardlaw Jones of Dade City, secretary-treasurer.

Pinellas

The list of officers who will serve the Pinellas County Medical Society during 1951 appeared in the December Journal.

The regular monthly meeting of the Society was held on January 8 at the Detroit Hotel in St. Petersburg. Dr. Richard H. Sinden of St. Petersburg presented a scientific paper on "Diabetic Complications."

Polk

The following officers for 1951 were elected by the membership of the Polk County Medical Society at the December meeting: Dr. John W. Vaughn, Lakeland, president; Dr. Robert J. Jahn, Winter Haven, vice-president, and Dr. Jere W. Annis, Lakeland, secretary-treasurer.

Putnam

At its regular meeting in December, the Putnam County Medical Society held its annual election of officers. Those elected to office were Dr. Claude M. Knight of Palatka, president, and Dr. James W. Brantley of Grandin, secretary-treasurer.

St. Johns

At the regular December meeting of the St. Johns County Medical Society, the following officers were elected: Dr. Joseph A. Shelley, St. Augustine, president; Dr. A. Clark Walkup, St. Augustine, vice-president; Dr. James J. DeVito, St. Augustine, secretary, and Dr. George C. Hopkins, St. Augustine, treasurer.

St. Lucie-Okeechobee-Martin

The newly-elected officers of the St. Lucie-Okeechobee-Martin County Medical Society are as follows: Dr. Julian D. Parker of Stuart, president; Dr. Richard F. Sinnott, Ft. Pierce, vice-president, and Dr. Adrian M. Sample of Ft. Pierce, secretary-treasurer.

Advertisement

From where I sit
by Joe Marsh

Watch Out For The "Blind Spots"

Stopped by Squint Miller's farm the other day and saw a vinegar bottle in his kitchen with an oversized cucumber inside it. The cucumber filled the whole bottle.

"What's a cucumber doing in there?" I asked him. "That's my 'blind spot' reminder," says Squint. "My grandmother kept one in her kitchen to remind her to take stock of herself now and then.

"*I slipped the bottle over the cucumber when it was just starting to grow on the vine,*" *he went on.* "*And like certain viewpoints we acquire, not noticed, it just grew and grew—now it's there to stay.*"

From where I sit, we could all take a cue from Squint and watch out for our own "blind spots." Sometimes we impose our views on our neighbor without thinking of his rights as an American—his right to follow his profession where and how he chooses, or say, his right to enjoy a glass of beer. No more "blind spots" if we keep our eyes—and minds—open!

Joe Marsh

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SMOOTHER CERVICAL CONIZATION

with the BIRTCHER BLENDTOME

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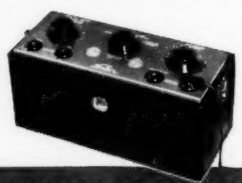

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Orange

Officers elected to serve the Orange County Medical Society during 1951 include: Dr. Fred Mathers, president; Dr. Carl S. McLemore, president-elect; Dr. Merrill Wattles, vice-president; Dr. Gerald W. Jones, secretary, and Dr. Joseph C. Hayward, treasurer, all of Orlando.

Palm Beach

Dr. Ralph M. Overstreet, Jr., of West Palm Beach will serve as president of the Palm Beach County Medical Society during 1951. Officers elected to serve with Dr. Overstreet at the regular December meeting include Dr. Cecil M. Peek of Belle Glade, president-elect; Dr. Alvin E. Murphy of Palm Beach, vice-president; Dr. Lorenzo James of West Palm Beach, secretary, and Dr. Frederick K. Herpel of West Palm Beach, treasurer.

Sarasota

Dr. Sherrel D. Patton of Sarasota is the newly-elected president of the Sarasota County Medical Society. Other officers for 1951 include Dr. Henry G. Morton, vice-president, and Dr. Millard B. White, secretary-treasurer, also of Sarasota.

Seminole

At its regular business meeting in December, the Seminole County Medical Society held its annual election of officers. Those elected to office were Dr. Thomas F. McDaniel of Sanford, president; Dr. Wade H. Garner of Sanford, vice-president, and Dr. Frank L. Quillman, Sanford, secretary-treasurer.

Suwannee

Officers of the Suwannee County Medical Society for 1951 were elected at the December meeting. Dr. Irby H. Black of Live Oak was re-elected president and Dr. J. Dillard Workman of Live Oak was re-elected secretary-treasurer.

Taylor

Officers elected to serve the Taylor County Medical Society during 1951 are: Dr. Ralph J. Greene of Perry, president, and Dr. Walter J. Baker of Foley, secretary.

Volusia

The Volusia County Medical Society elected officers for 1951 at its December meeting. Dr. Peter A. Drohomer of Daytona Beach was elected president, Dr. Robert O. Burry of DeLand was elected vice-president, and Dr. Robert L. Miller of Daytona Beach was re-elected secretary-treasurer.

Walton-Okaloosa

At the regular December meeting, the Walton-Okaloosa County Medical Society elected officers to serve during 1951. Dr. Arthur G. Williams, Jr., Valparaiso, was elected president, and Dr. Ralph B. Spires, DeFuniak Springs, was elected secretary.

Washington-Holmes

New officers who will serve the Washington-Holmes County Medical Society during 1951 include Dr. N. J. Dawkins of Vernon, president, and Dr. Bayllye W. Dalton of Chipley, secretary.

OBITUARIES

John Alfred Beals

Dr. John A. Beals of Jacksonville died at St. Luke's Hospital in that city on Nov. 6, 1950 after a lingering illness. Death came on the eve of his sixtieth birthday.

The son of John and Dora Fondrey Beals of Westfield, Ind., Dr. Beals was born there Nov. 7, 1890. After receiving his academic education, he was associated for a brief period with his father in managing a large glass manufacturing business. In 1913 he entered the Tulane University of Louisiana School of Medicine and received the degree of Doctor of Medicine there in 1919. During World War I, he served in the medical reserve.

After training at various hospitals under outstanding radiologists of his time, Dr. Beals served as radiologist at Riverside Hospital in Jacksonville from 1923 to 1928. He then went to Chattanooga, Tenn., to practice, but returned to Jacksonville in 1938 to become chief radiologist at St. Luke's Hospital. He held this position until his death, at which time he was also chief of the medical staff there and a member of the executive staff of the Duval Medical Center. Locally, he was a Kiwanian and a member of the First Christian Church.

Dr. Beals was a past treasurer and president of the Duval County Medical Society; a member of the Florida Medical Association, the American Medical Association and the Southern Medical Association; a certificant of the American Board of Radiology; a fellow, councillor and member of the Board of Chancellors of the American College of Radiology; a member of the Radiological So-

Cook County Graduate School of Medicine

ANNOUNCES CONTINUOUS COURSES

SURGERY—Intensive Course in Surgical Technic, Two Weeks, starting February 19, March 5, March 19. Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, starting March 5, April 2, April 30. Surgical Anatomy & Clinical Surgery, Two Weeks, starting February 19, March 19, April 16. Surgery of Colon & Rectum, One Week, starting March 5, April 9. Basic Principles in General Surgery, Two Weeks, starting April 2. Gallbladder Surgery, Ten Hours, starting April 23. Fractures & Traumatic Surgery, Two Weeks, starting March 19.

GYNECOLOGY—Intensive Course, Two Weeks, starting February 19, March 19. Vaginal Approach to Pelvic Surgery, One Week, starting March 5, April 2.

OBSTETRICS—Intensive Course, Two Weeks, starting March 5, April 2.

MEDICINE—Intensive General Course, Two Weeks, starting April 23. Gastro-enterology, Two Weeks, starting May 14. Gastroscopy, Two Weeks, starting March 5. Electrocardiography & Heart Disease, Two Weeks, starting March 19.

PEDIATRICS—Intensive Course, Two Weeks, starting April 2. One Year Full Time Course starting July 2. Informal Clinical Course every two weeks.

UROLOGY—Intensive Course, Two Weeks, starting April 16. Cystoscopy, Ten Day Practical Course, every two weeks.

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ciety of North America; and a past secretary, vice president and president of the Florida Radiological Society.

Surviving are the widow, Mrs. Harriet Christian Beals; one daughter, Miss Paloma Beals of Jacksonville; two sons, Capt. John Thomas Beals of Biloxi, Miss., and Daniel F. Beals of Jacksonville; his mother, Mrs. Dora Fondrey Beals of Westfield, Ind.; and three grandchildren, John M., Catherine A. and Christopher Beals.

Miriam Magruder Drane

Dr. Miriam M. Drane of St. Petersburg died in a hospital in that city on Nov. 28, 1950. She was 57 years of age.

Born at Lone Station, Miss., on Jan. 7, 1893, Dr. Drane received the Bachelor of Arts degree from the University of Tennessee in 1914, and in 1926 was awarded the degree of Doctor of Medicine from the College of Medicine of that institution. She also had training at the University of Chicago and Michael Reese Hospital in Chicago.

After receiving her medical degree, Dr. Drane was associated in the practice of medicine for a time with Dr. Henry Rudner in Memphis. In 1929 she established her own office there, practicing internal medicine and majoring in allergy. She was licensed in Florida in 1940. Locating in St. Petersburg in 1943, she practiced there the remaining years of her life. Locally, she was on the staff of both St. Anthony's and Mound Park hospitals. She held membership in the Woman's Auxiliary of St. Anthony's Hospital, the Zonta, Pan-Hellenic and Business Women's clubs and the Baptist Church.

Dr. Drane was a member of the Pinellas County Medical Society, the Florida Medical Association and the American Medical Association. In 1949 she was elected an alternate delegate to the Florida Medical Association from the Pinellas County Medical Society, and in recent years had been a contributor to the Journal of the Florida Medical Association.

Survivors include four brothers, Walter Earl Drane, Forest, La., Hayward Drane, Natchez, Miss., T. G. Drane, Texas, and Herbert Drane, Memphis, Tenn.; two sisters, Mrs. T. A. Wood and Miss Vera L. Drane of Gulfport, Miss.; and one cousin, Miss Ellen Leech of St. Petersburg.

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BOOKS RECEIVED

PHYSICIAN TO THE WORLD, THE LIFE OF GENERAL WILLIAM C. GORGAS. By John M. Gibson. Price, $4.50. Pp. 315. Durham, N. C.: Duke University Press. 1950.

"The man who made the building of the Panama Canal possible," William Crawford Gorgas, is most noted for the successful battle he waged against yellow fever, but more interesting to the reader perhaps is the story behind his fame. Drawn from personal correspondence of Gorgas and his family, here is a heart-warming story of a little boy who shivered in the early morning air of Charleston as he watched the first shell explode over Fort Sumter; of a young man whose determination to enter the Army led him to medical college because the only road left open for entrance was through the Medical Department; of an Army physician who, disregarding personal danger, deliberately entered a yellow fever ward to study the disease; and of the romance of a doctor who married one of his patients. Here is the success story of a fighter for whom ridicule gave way to praise and who became Surgeon General of the United States Army during World War I.

Gorgas' conquest of yellow fever has overshadowed his brilliant work in the curbing of malaria, dysentery, typhoid and pneumonia. Although his name is not so familiar to this generation, Gorgas was known throughout the world before his death in 1920 for his work in Cuba, Panama, South America, Africa and Europe. Many widely accepted sanitation principles of today were laid down by him. This biography makes interesting and entertaining reading.

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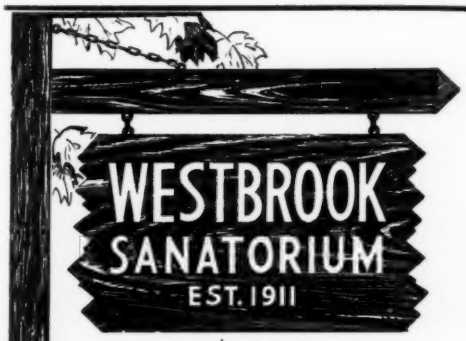

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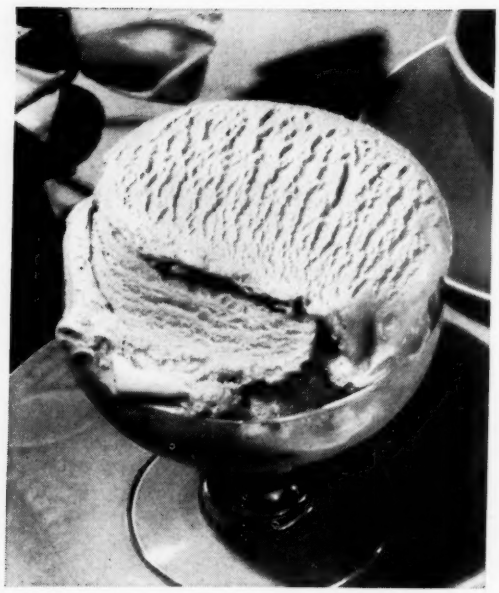

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What Every Doctor Should Know

There is contagion in the grin and fellowship that spreads with the wish for a Happy New Year because everyone is looking in the same direction. A beginning is good. Its potentialities, undeveloped and filled with hope, make for the gaiety and noise symbolic of this season.

A Happy New Year. How many facets it reveals when individualized. What brings joy to one means little to another. The wish is just a beginning; a stepping stone to the various paths we each must follow if we want to make our wish come true. For instance doctors, to have a good year, must grow in unity and reinforce the preservation of the ideals which wave like a flag of independence over the profession. They must maintain their freedom to practice medicine without regimentation of their services. They must have closer understanding of the people, and consideration and respect by the people.

Such broad stepping stones cover a lot of ground and indicate many paths of travel. No progress along these roads can be made with wishes. So, busy doctors, help us recruit your wives. We cordially invite non-auxiliary members to join us in contributing to the realization of your wish. We have the plan and the materials with which to work. We need more workers. They can bring their interest in your welfare as a token contribution.

The work reveals itself to the worker. The fields that are plowed and planted by the sowers of seed look barren and uninteresting to indiffer-

ent travelers who glance at the toilers in passing, and wonder what keeps them so long in the field. Because some took different paths last year they didn't know the disaster that threatened their land nor did they see the hours spent in prevention and salvage. A veritable army of volunteer workers tilled that ground and in the place of chaff was planted wheat. There is pride of accomplishment in the hearts of those who stay in the field, and visions of growth which only those who plant the seed can realize.

In one small Auxiliary, a group of twenty-three doctors' wives were asked to list the various organizations to which they belonged. The number totaled one hundred and thirty-five. We plant the seeds of education. Think of the value of one hundred and thirty-five organizations receiving accurate information on why a doctor resists compulsion in his practice of medicine. Think of the damage caused by ignorance of medical interests by a doctor's wife when she participates in other organizations.

We enlist the wives to study and become informed because the planter has to know the nature of his crop. Education is not a hardy plant. The ground must be properly prepared to encourage the growth. We can't be indifferent because the sowers of dragon seed are zealous and are interested in our ground.

We want more to discover that our work with ideas and principles can be interesting. In our allegorical "garden club" we plant, we weed and we reap. With enough hands sowing the seeds of public relations, good will and education we will reap a harvest of dignity in which even our children can share in a happier new year.

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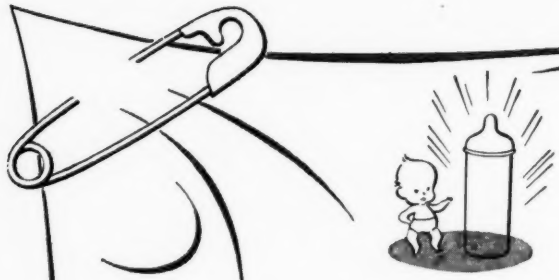

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